

IN THE CLAIMS

1. (Presently Amended): A method for identifying a compound which modulates the activity of a polypeptide selected from the group consisting of:

(a) an isolated polypeptide which is encoded by the nucleotide sequence contained in the plasmid deposited with ATCC as Accession Number PTA-1530;

(b) an isolated cardiac-related ankyrin-repeat protein kinase polypeptide comprising an amino acid sequence encoded by a nucleic acid molecule which hybridizes to a complement of a nucleic acid molecule consisting of SEQ ID NO:1 or 3, [[3, 7 or 9,]] in 6X SSC at 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 65°C;

(c) an isolated cardiac-related ankyrin-repeat protein kinase polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO:1 or 3, [[3, 7 or 9,]];

(d) an isolated cardiac-related ankyrin-repeat protein kinase polypeptide comprising an amino acid sequence which is at least 90% identical to the amino acid sequence of SEQ ID NO:2[[or 8]];

(e) an isolated polypeptide consisting of at least 25 consecutive amino acid residues of the amino acid sequence of SEQ ID NO:2[[or 8]]; and

(f) an isolated polypeptide comprising amino acid residues 463-716 of SEQ ID NO:2[[or 8]], the method, comprising:

contacting the polypeptide or a cell expressing the polypeptide with a test compound; and

determining the effect of the test compound on the activity of the polypeptide to thereby identify a compound which modulates the activity of the polypeptide.

2. (Presently Amended): The method of claim 1, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:2[[or 8]].

3. (Original): The method of claim 1, wherein the activity is a kinase activity.

4. (Original): The method of claim 3, wherein the effect of the test compound on the kinase activity of the polypeptide is determined by monitoring autophosphorylation of the polypeptide.

5. (Original): The method of claim 3, wherein the effect of the test compound on the kinase activity of the polypeptide is determined by monitoring phosphorylation of a heterologous substrate.
6. (Original): The method of claim 5, wherein the heterologous substrate is selected from the group consisting of H1 histone, myelin basic protein, ATF-2 and Phas-1.
7. (Original): The method of claim 1, wherein the activity is modulation of cell proliferation.
8. (Original): The method of claim 1, wherein the activity is modulation of cell growth.
9. (Original): The method of claim 1, wherein the activity is modulation of cell differentiation.
10. (Original): The method of claim 1, wherein the cell expressing the polypeptide is a heart cell.
11. (Original): The method of claim 1, wherein the compound inhibits the activity of the polypeptide.
12. (Original): The method of claim 1, wherein the compound stimulates the activity of the polypeptide.